

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER D-202
Relating to Exemptions Under Section 27156
of the Vehicle Code

Detroit Diesel Corporation
6V-92TA Heavy-Duty Diesel Engine Rebuild

Pursuant to the authority vested in the Air Resources Board by Section 27156 of the Vehicle Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-5;

IT IS ORDERED AND RESOLVED: That the modification of 1979 through 1984 model 6V-92TA Detroit Diesel Corporation heavy-duty diesel engine has been found not to reduce the effectiveness of required motor vehicle pollution control devices. The modification will consist of replacing the OEM aftercooler, cylinder liner, connecting rod and piston assembly, fuel injectors, blower assembly, turbocharger, air inlet housing, gear train (for blower drive gear) and camshaft. This modification (parts replacement) is hereby exempt from the prohibitions of Vehicle Code Section 27156.

This Executive Order is valid provided that installation instructions for this engine rebuild will not recommend tuning the vehicle to specifications different from those submitted by the device manufacturer.

Changes made to the design or operating conditions of the engine rebuild, as exempted by the Air Resources Board, that adversely affect the performance of a vehicle's pollution control system shall invalidate this Executive Order.

Marketing of this device using an identification other than that shown in this Executive Order or marketing of this device for an application other than those listed in this Executive Order shall be prohibited unless prior approval is obtained from the Air Resources Board. Exemption of a kit shall not be construed as an exemption to sell, offer for sale, or advertise any component of a kit as an individual device.

Marketing of this device using an identification other than that shown in this Executive Order or marketing of this device for an application other than those listed in this Executive Order shall be prohibited unless prior approval is obtained from the Air Resources Board. Exemption of a kit shall not be construed as an exemption to sell, offer for sale, or advertise any component of the product as an individual device.

This Executive Order does not constitute any opinion as to the effect the use of this device may have on any warranty either expressed or implied by the vehicle manufacturer.

THIS EXECUTIVE ORDER DOES NOT CONSTITUTE A CERTIFICATION, ACCREDITATION, APPROVAL, OR ANY OTHER TYPE OF ENDORSEMENT BY THE AIR RESOURCES BOARD OF ANY CLAIMS OF THE APPLICANT CONCERNING ANTI-POLLUTION BENEFITS OR ANY ALLEGED BENEFITS OF THE DDC ENGINE REBUILD PACKAGE.

No claim of any kind, such as "Approved by the Air Resources Board" may be made with respect to the action taken herein in any advertising or other oral or written communication.

Section 17500 of the Business and Professions Code makes untrue or misleading advertising unlawful, and Section 17534 makes violation punishable as a misdemeanor.

Section 43644 of the Health and Safety Code provides as follows:

"43644, (a) No person shall install, sell, offer for sale, or advertise, or, except in an application to the state board for certification of a device, represent, any device as a motor vehicle pollution control device for use on any used motor vehicle unless that device has been certified by the state board. No person shall sell, offer for sale, advertise, or represent any motor vehicle pollution control device as a certified device which, in fact, is not a certified device. Any violation of this subdivision is a misdemeanor."

Any apparent violation of the conditions of this Executive Order will be submitted to the Attorney General of California for such action as he deems advisable.

Executed at El Monte, California, this 17th day of July, 1990.



R. B. Summerfield
Assistant Division Chief
Mobile Source Division

State of California
AIR RESOURCES BOARD

Evaluation of Detroit Diesel Corporation 6V-92TA MUI Heavy Duty Diesel Coach
Engine Modification for 1979 through 1984 Model Year Engine to the 1987
California Certified Configuration From Prohibitions in Vehicle Code Section
27156 in Accordance with Section 2222, Title 13, of the California
Administrative Code

July 1990

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Administrative Code

by

Mobile Source Division

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(This report has been reviewed by the staff of the California Air Resources Board and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Air Resources Board, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.)

SUMMARY

Detroit Diesel Corporation (DDC) has applied for an exemption from the prohibitions of Vehicle Code Section 27156 for their Rebuild Program for modifying 1979 through 1984 DDC model CV-92TA heavy-duty diesel coach engines using the 1987 California certified configuration.

The modifications on these older engines will utilize some components of the 1987 California certified CV-92TA engine. The purpose of this modification, according to DDC, is to improve engine durability, performance and emission control technology.

The staff reviewed DDC's certification documents to insure that the components used in the engine rebuild are those parts used in 1987 California certified engines. Based on the submitted information staff recommends that DDC be granted an exemption and that Executive Order D-202 be issued.

CONTENTS

	<u>Page Number</u>
<u>SUMMARY</u>	I
<u>CONTENTS</u>	II
I. <u>INTRODUCTION</u>	1
II. <u>CONCLUSIONS</u>	1
III. <u>RECOMMENDATION</u>	1
IV. <u>6V-92TA ENGINE REBUILD DESCRIPTION</u>	2
V. <u>DISCUSSION</u>	2-3

Evaluation of Detroit Deisel Corporation's 6V-92TA Heavy-Duty Coach Engine Rebuild Program in Accordance with Section 2222, Title 13, of the California Administrative Code.

I. INTRODUCTION

Detroit Deisel Corporation (DDC), of Detroit, Michigan, has requested for an exemption from the prohibitions of California Vehicle Code Section 27156 for an engine rebuild program. DDC proposes to make available an engine modification package to upgrade 1979 through 1984 model 6V-92TA Detroit Diesel heavy-duty coach engines by utilizing some components of the 1987 California certified 6V-92TA engine. The purpose of the modification, according to DDC, is to improve engine durability, performance and emission control technology.

II. CONCLUSIONS

Based on the information submitted, staff has determined that most parts to be used in the rebuild program are those designated for use on 1987 California certified engines. These newer engines conform to emission standards more stringent than that for 1979 through 1984 model engines. Since the rebuild program will modify older engines into a 1987 California certified configuration, staff concludes there will be no adverse effect on emissions from the rebuild program as proposed by DDC.

III. RECOMMENDATION

The staff is of the opinion that the DDC engine modification package for rebuilding 1979 through 1984 model 6V-92TA engines will not have any adverse effect on emissions. The staff, therefore, recommends that Executive Order No. D-202 be adopted.

IV. 6V-92TA Engine Rebuild Description

DDC proposes, in their rebuild program, to replace certain 1979 through 1984 OEM engine parts by rebuilding their coach engines with components utilized on 1987 model year California certified engine configuration. Under this program, old engines will be rebuilt to the latest configuration for mechanical injection engines. The parts which are to be upgraded are aftercooler, cylinder liner, connecting rod and piston assembly, fuel injectors, blower assembly, turbocharger, air inlet housing, gear train (for blower drive gear) and camshaft. Table I lists these parts by DDC part numbers.

V. DISCUSSION

Per Air Resources Board (ARB) engine change policy (ARB Mail Out No. 81-040) pertaining to heavy-duty vehicles, an engine which is rebuilt to non-OEM configuration must be reviewed by the ARB and receive a written exemption prior to rebuild.

DDC did not submit any test data to show that the modification will have possible effects on emissions.

Staff has reviewed the parts list and compared it with DDC's 1987 certification document to assure that the components used in the engine rebuild are those parts used in 1987 California certified engines. Because not all parts contained in DDC's letter are listed in DDC's certification application, only a partial list of the parts were cross-checked and verified. However, although the other parts are not listed in the certification application (cylinder liner, gear train for the blower drive

gear, air inlet housing, camshaft, and piston rings) these parts are designated for use on the 1987 configuration which was designed to meet more stringent emission standards. Therefore, the staff is of the opinion that there will be no adverse effect on emissions during the rebuild of the subject engine.

Table
DETROIT DIESEL CORPORATION
PROCEDURE FOR THE REBUILDING OF 1979 THRU 1984 MODEL YEAR
6V92TA MUI COACH ENGINES TO THE 1987 MODEL YEAR CONFIGURATION

NOMENCLATURE	1987MY (REPLACEMENT PARTS)	1979-1984MY (ORIGINAL PARTS)
Aftercooler	3-Pass Aftercooler - 8925149	79-81 18-Fin Aftercooler-5101152 81-83 24-Fin Aftercooler-8923051
Cylinder Block Cylinder Liners	Same as original - 5107176	Not Affected - Reuse Normally replaced at overhaul
Connecting Rod & Piston Assy	New Parts: 23503783 - Ring Set Piston Skirt Seal - 8923729 Slipper Bushing - 23501687 Piston Skirt - 23503267	Normally replaced at overhaul
Fuel Injector	9E65 - 5229970 9E70 - 5229975 9F80 - 5226495	Same Same 7G75 - 5229905
Blower Assy	Bypass Blower - 8927039	Non-Bypass Blower
Turbocharger	TV7511, 1.08 A/R - 8927031	TV8102, 1.23 A/R - 5102352 TV8102, 1.08 A/R - 5101151 TV7101, 1.23 A/R - 5101509 TV7101, 1.39 A/R - 5103760
Air Inlet Housing	New Housing - 8926449 or 8928529	Housing - 5107060
Throttle Delay		Not Affected - Reuse
Governor		Not Affected - Reuse
Gear Train	Hardened Gears (Crank, Idler, Cam) LHR - 23503269, 23503272, 8928575 RHR - 8928573, 8938574, 8928571/5 Blower Drive Gear - 8928595	Standard Gears
Camshaft	Improved Camshafts (Material Only) LHR - 8921402, 8921403 RHR - 8921398, 23503670	Camshafts - Can be reused